

Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

Claims 1-30 (Cancelled).

31. (New) A telecommunications network, comprising:
plural interconnected nodes forming nodes of a
telecommunications network;

plural nodes of the interconnected nodes forming a
preconfigured cycle for a specific node of the
telecommunications network that is not in the preconfigured
cycle, the plural nodes of the preconfigured cycle including
all nodes of the telecommunications network that are directly
connected to the specific node; and

each of the plural nodes in the preconfigured cycle
comprising a router table, each router table identifying the
plural nodes of the preconfigured cycle.

32. (New) The telecommunications network of claim 31 in
which:

for any given node in the telecommunications network
there is an associated preconfigured cycle, and each
preconfigured cycle includes all nodes of the
telecommunications network that are directly connected to the
corresponding given node; and

the nodes of a specific preconfigured cycle each comprise
a router table that identifies the nodes of the specific
preconfigured cycle.

33. (New) The telecommunications network of claim 32 in
which the number of preconfigured cycles in the

telecommunications network is the minimum number required to provide a preconfigured cycle for each node of the telecommunications network.

34. (New) A method of protecting against node failure in a telecommunications network, in which the telecommunications network includes plural interconnected nodes, the method comprising the steps of:

identifying plural nodes of the interconnected nodes that form a preconfigured cycle for a specific node of the telecommunications network that is not in the preconfigured cycle, the plural nodes of the preconfigured cycle including all nodes of the telecommunications network that are directly connected to the specific node; and

providing at each of the plural nodes in the preconfigured cycle a router table, each router table identifying the plural nodes of the preconfigured cycle.

35. (New) The method of claim 34 further comprising the steps of:

providing a preconfigured cycle for each given node in the telecommunications network, in which each preconfigured cycle includes all nodes of the telecommunications network that are directly connected to the given node; and

providing at the plural nodes corresponding to each specific preconfigured cycle a router table that identifies the nodes of the specific preconfigured cycle.

36. (New) The method of claim 35 in which the number of preconfigured cycles in the telecommunications network is the minimum number required to provide a preconfigured cycle for each node of the telecommunications network.

37. (New) The method of claim 34 further comprising the step of:

upon failure of a given node, routing all data packets whose preferred path includes the given node onto the preconfigured cycle corresponding to the given node.

38. (New) The method of claim 37 in which the preferred path is the least cost path.

39. (New) The method of claim 38 in which each data packet routed around the preconfigured cycle contains an ID field that identifies the preconfigured cycle of nodes, a path cost field containing the cost of the least cost path and a data field.

40. (New) The method of claim 38 in which each node in the preconfigured cycle routes the data packet around the preconfigured cycle until the path cost from a node in the preconfigured cycle to the destination of the data packet is less than the cost of the least cost path.

41. (New) The method of claim 37 further comprising the step of:

at each node in the preconfigured cycle of nodes, assessing whether to continue on the preconfigured cycle of nodes or leave the preconfigured cycle of nodes at that node.

42. (New) The method of claim 41 in which the assessment is made by assessing the cost of the route leaving the preconfigured cycle at that node.

43. (New) The method of claim 42 in which the assessment is made by comparing the cost of the route leaving the

preconfigured cycle at that node with the cost of the route had the node not failed.

44. (New) The method of claim 37, further comprising the step of:

removing data packets from the preconfigured cycle of nodes when data packets have returned to the entry point of the data packet onto the preconfigured cycle.